

Foreword

A symposium on the polar biology was held at the National Institute of Polar Research, Tokyo, from 8 to 10 of September 1983. This is the sixth of the annual symposium, which has been organized by the Biology Research Group of the National Institute of Polar Research.

The first symposium on the terrestrial ecosystem in the Syowa Station area was held in 1977 and the proceedings was published in *Mem. Natl Inst. Polar Res., Spec. Issue*, **11** (1979). The second one, held in 1978, was on the marine biology with a prospect of the Japanese studies on the Southern Ocean biology. Since the third one in 1979, the symposium was named the "Symposium on Antarctic Biology". Selected papers presented at the third symposium on the ecology of the ice-covered seas were published in *Mem. Natl Inst. Polar Res., Ser. E*, **34** (1981). The fourth one in 1980 was composed of two sessions, marine ecosystems and environmental monitoring, and the proceedings was published in *Nankyoku Shiryô (Antarct. Rec.)*, **73** (1981). In 1981, the fifth one was held to review the Japanese contributions to FIBEX (First International BIOMASS Experiments) and the proceedings was published in *Mem. Natl Inst. Polar Res., Spec. Issue*, **23** (1982). In 1982, the annual symposium was not carried out because the BIOMASS Colloquium, under the sponsorship of SCAR, SCOR and National Committees on Antarctic Research and for Oceanic Research, Science Council of Japan, was held at and hosted by the National Institute of Polar Research. Proceedings of the Colloquium was published in *Mem. Natl Inst. Polar Res., Spec. Issue*, **27** (1983).

At the sixth symposium in 1983, the name of the symposium was changed to "Symposium on Polar Biology", in order to include our interest in not only the Antarctic areas but also the Arctic areas. The Symposium was organized to synthesize the BIOMASS-related works in open waters and coastal ice-covered waters. The Symposium consisted of the following scientific sessions;

1. Physical and chemical environments
2. Primary production
3. Zooplankton and micronekton
4. Fish and benthos
5. Sea birds and marine mammals
6. Chlorinated hydrocarbons.

A total of 28 papers was read in these sessions, which included two papers on the marine biological phenomena in the northern hemisphere. The present volume includes 16 papers and four extended abstracts out of the 28 presentations.

On this occasion, the information on implementation of the Japanese SIBEX (Second International BIOMASS Experiments) phase one (1983/84) was exchanged among the scientists participating in the experiments.

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